

WHAT IS CLAIMED IS:

1. A modular oven for food products, the oven including a preferably self-propelled conveyor device for entraining products from an inlet to an outlet of the oven, and
5 comprising in cascade at least two, and preferably three, individual interchangeable modules, each individual module presenting:
 - a ceiling of adjustable height that presents first air and/or steam injection means to generate forced
10 convection;
 - a floor of adjustable height that presents second air and/or steam injection means for generating forced convection;
 - floor burners for baking by convection, which
15 burners are disposed between the floor and the conveyor device and are of adjustable vertical position; and
 - ceiling burners for baking by radiation, which burners are disposed between the conveyor device and the ceiling, and are adjustable in vertical position and in
20 pointing direction.
2. A modular oven according to claim 1, wherein in each individual module the ceiling is adjustable at least between a high position and a low position.
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3. A modular oven according to claim 1, wherein in each individual module the floor is adjustable between at least a high position and a low position.
- 30 4. A modular oven according to claim 1, wherein the floor burners are adjustable between at least a high position and a low position, and are preferably pointable in any direction.
- 35 5. A modular oven according to claim 1, wherein the ceiling burners are adjustable between at least a high

position and a low position, and are preferably pointable in any direction.

6. A modular oven according to claim 1, wherein the
5 burners are pointable.

7. A method of using a modular oven according to claim 1 for baking biscuit or cookie products, wherein the oven comprises three individual modules in cascade, with the
10 first module being used to perform a pre-baking and/or rising step, with the second module being used to perform a baking step, and with the third module being used to perform a step of browning and/or drying and/or cooling the product.

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8. A method according to claim 7, wherein to manufacture crackers, the method implements a gridded conveyor belt as the conveyor device, and implements the following steps:

20 · in the first module, positioning the ceiling and the floor in their high positions and operating the floor burners, which are thus as close as possible to the conveyor device, such that the conductive and radiant flux is increased;

25 · in the second module, positioning the ceiling in the low position and the floor in the high position and injecting air through the ceiling and the floor to obtain increased convective flux; and

30 · in the third module, positioning the ceiling and the ceiling burners in the low position and actuating the ceiling burners to provide radiant and convective flux for browning the products and for drying them.

9. A method according to claim 7, wherein to manufacture
35 sponge, the method implements a solid conveyor belt as the conveyor device, and implements the following steps:

· in the first module, positioning the ceiling and the floor in their high positions and operating the floor burners, which in their high position are thus as close as possible to the conveyor device, such that the
5 conductive flux is at its maximum, possibly accompanied by delivering superheated steam, e.g. at 350°C-400°C;

· in the second module, positioning the ceiling burners and the floor burners in their low positions and actuating said burners to obtain baking by natural
10 convection without injecting air via said injector means, in combination with increased radiation by lowering the ceiling into the low position; and

· in the third module, positioning the ceiling in the low position and the floor in the high position, and
15 injecting hot air through the ceiling and the floor to obtain drying by forced convection.

10. A method according to claim 7, wherein for manufacturing a dry laminated biscuit or cookie, the
20 method implements the following steps:

· in the first module, positioning the ceiling and the floor in middle positions intermediate between said high and low positions, and positioning the ceiling and floor burners in middle positions intermediate between
25 said high and low positions, and actuating said burners with air injection through the ceiling to encourage heating by radiation while maintaining a convective flux at a value that is low enough to avoid excessively heating the product to the core and to avoid
30 delamination;

· in the second module, positioning the ceiling in the low position and the floor in the high position, positioning the ceiling burners in the low position and the floor burners in the high position, and actuating all
35 of the burners while injecting air through the floor to increase conductive flux; and

· in the third module, repeating the same settings as in the first module, to brown and dry the product.

11. A method according to claim 7, wherein for
5 manufacturing a product from a paste cut by a rotary machine, the method implements the following steps:

· in the first module, positioning the ceiling and the floor in middle positions intermediate between said high and low positions, and positioning the ceiling and
10 floor burners in middle positions intermediate between said high and low positions, and actuating solely air injection through the ceiling and the floor to encourage heating by convection;

· in the second module, positioning the ceiling and
15 the ceiling burners in the high position, positioning the floor and the floor burners in the high position, and actuating air injection through the ceiling and the floor to encourage heating by convection; and

· in the third module, repeating the same settings
20 as in the first module.

12. A method according to claim 7, wherein for manufacturing paste products deposited in the form of individual pieces, the method implements the following
25 steps:

· in the first module, positioning the ceiling and the floor in middle positions intermediate between said high and low positions, and positioning the ceiling burners and the floor burners in middle positions
30 intermediate between said high and low positions, and actuating the ceiling burners to control spreading of the paste without excessively heating it, by combined radiant and conductive heating;

· in the second module, positioning the ceiling and
35 the floor in said middle positions, and positioning the floor burners in the middle position, to increase the total energy flux; and

· in the third module, positioning the floor in its high position, and the floor burners in the high position to perform drying by entrainment, and also positioning the ceiling in the low position and the ceiling burners
5 in the low position to encourage browning.